

# PETROSONIC III

## Automatic Tank Gauging System

### Petro Vend

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**Evaluator:** Underwriters Laboratories, Inc. - 11/04/94

**System Description:** *The **Petrosonic III** is a microprocessor-based system capable of monitoring up to eight probes. The controller interprets probe data, converts the product level measurements into volume measurements and produces reports. The controller records alarms, such as low product, high water, overfill and theft. The controller also functions as a leak indicator by continuously watching for extremely small changes in product level. This **is not** leak testing, but product variances. The **Petrosonic III** has alarm inputs you can connect to external devices such as hydrocarbon detectors or alarm bells. The system has three modes of operation; privileged, non-privileged and standby. If the system is in the privileged mode, you must have an access code. Default code is **HELLO**.*

**Certification:** 0.2 gph with PD = 99.07% and PFA = 0.93%

**Tank Capacity:** Max. 15,000 gal

**Test Period:** Min. 4 hrs with tank 50 - 95% full

**Limitations:**

- No dispensing or delivery during test
- Not evaluated using manifolded tanks
- Not capable of monitoring product lines
- Not capable of continuous monitoring

## SAMPLE REPORTS PETROSONIC III

REPORT NAME	FUNCTION #
Status	1
Inventory	2
Deliverys	3
Variation	4
Alarms	7
Tank Info	8
Tank Leak Test	53

1	2	3	PR
4	5	6	TM
7	8	9	AC
CL	0	EN	CN

### Access #'s for Reports

### Console Keypad

## ALL REPORTS ARE OBTAINED IN THE FOLLOWING MANNER:

### 1. *Printing Reports*

- Press **ACCESS**
- Press **ENTER**; console displays '**non-privileged**' followed by '**display command > 0**'
- Enter **Access #** for desired report (above)
- Press **PRINT**
- Press **ENTER** for report on all tanks

### 2. *Print List of Keypad Commands (Help)*

- Press **ACCESS**
- Press **ENTER**
- Press **PRINT**
- Press **ENTER**

### 3. *Abort Command*

- Press **CANCEL**
- Press **ACCESS**

# PETROSONIC III

\*\* PETROSONIC III \*\*  
 TANK GAUGE SYSTEMS.  
 BY PETRO VEND INC.

STATUS  
 12:07 PM TUE NOV 13, 1990  
 ----- TANK -----  
 ALARM           1 2 3 4 5 6 7 8  
 OVERFLOW      2 2\* .  
 LOW PRODUCT   . . .  
 HIGH WATER    1\* 1\* 1\*  
 TEMPERATURE   . . .  
 MISSED MEAS   1\* 1\* .  
 LEAK INDICATED 1 . .  
           THEFT . . 6  
           DELIVERY 1 2 1  
           SALE    2 . 1  
 ACCNTING PERIOD . . .  
 TIMED LEAK TEST . . .  
  
 POWER FAILURE   5  
 PRINTER FAILURE  1  
           EXTERNAL .  
 SAVED INVENTORY  2  
           SCHEDULE  3

6 ACTIVE FLAGS, 34 STORED MESSAGES,  
 397 FREE BLOCKS, SYSTEM OPEN

## Status Report

\* Active Flag (alarm condition)

\*\* PETROSONIC III \*\*  
 TANK GAUGE SYSTEMS.  
 BY PETRO VEND INC.

INVENTORY  
 12:24 PM TUE NOV 13, 1990  
 ===== TANK 4 DIESEL  
 8603.2 GL NET CORRECTED PRODUCT VOLUME.  
 8605.6 GL NET CORRECTED TANK VOLUME.  
 8586.9 GL GROSS MEASURED TANK VOLUME.  
 1413.1 GL VOLUME LEFT IN TANK.  
 76.90 IN PRODUCT LEVEL.  
 56.3 F AVERAGE FUEL LEVEL.  
 0.4 IN WATER LEVEL

## Inventory Report

\*\* PETROSONIC III \*\*  
 TANK GAUGE SYSTEMS.  
 BY PETRO VEND INC.

MESSAGES  
 12:24 PM WED NOV 14, 1990  
  
 DELIVERY  
 ===== TANK 4 DIESEL  
           DELIVERY  
           DELIVERY  
           START MEASUREMENT  
           10:17 AM WED NOV 14, 1990  
           5079.3 GL NET CORRECTED PRODUCT VOLUME.  
           5093.5 GL NET CORRECTED TANK VOLUME.  
           5083.6 GL GROSS MEASURED TANK VOLUME.  
           4916.4 GL VOLUME LEFT IN TANK.  
           48.63 IN PRODUCT LEVEL.  
           56.3 F AVERAGE FUEL TEMPERATURE.  
           0.9 IN WATER LEVEL.  
           END MEASUREMENT  
           10:43 AM WED NOV 14, 1990  
           \* OVERFLOW \*  
           \* HIGH WATER \*  
           9965.5 GL NET CORRECTED PRODUCT VOLUME.  
           9989.6 GL NET CORRECTED TANK VOLUME.  
           9974.3 GL GROSS MEASURED TANK VOLUME.  
           25.7 GL VOLUME LEFT IN TANK.  
           94.73 IN PRODUCT LEVEL.  
           57.1 F AVERAGE FUEL TEMPERATURE.  
           1.2 IN WATER LEVEL.  
           DELIVERY VOLUME  
           4896.1 GL NET CORRECTED TANK VOLUME.  
           4890.7 GL GROSS MEASURED TANK VOLUME.  
           57.9 F ESTIMATED DELIVERY TEMPERATURE.

## Delivery Report

## SAMPLE REPORTS PETROSONIC III

\*\*\* PETROSONIC III \*\*\*  
TANK GAUGE SYSTEMS.  
BY PETRO VEND, INC.

MESSAGES  
12:24 PM THU NOV 15, 1990

TIMED LEAK TEST  
===== TANK 4 DIESEL  
TIMED LEAK TEST  
START MEASUREMENT  
12:00 AM THU NOV 15, 1990  
5453.1 GL NET CORRECTED VOLUME.  
5455.5 GL GROSS MEASURED VOLUME.  
5446.6 GL VOLUME LEFT IN TANK.  
51.37 IN PRODUCT LEVEL  
56.9 F AVERAGE FUEL TEMPERATURE  
0.4 IN WATER LEVEL  
END MEASUREMENT  
5453.2 GL NET CORRECTED VOLUME.  
5455.6 GL GROSS MEASURED VOLUME.  
4554.7 GL VOLUME LEFT IN TANK  
51.36 IN PRODUCT LEVEL  
56.0 F AVERAGE FUEL TEMPERATURE  
0.4 IN WATER LEVEL  
LEAK RATE  
0.016 GL/HOUR NET CORRECTED LEAK RATE.  
-0.9 F TEMPERATURE CHANGE  
FOR 4.0 HOURS  
THRESHOLD = 0.05 GL/HOUR  
TEST PASSED

### Leak Test Report

Leak Test Report is a subset of Messages Report

\*\*\* PETROSONIC III \*\*\*  
TANK GAUGE SYSTEMS.  
BY PETRO VEND INC.

MESSAGES  
1:06 PM TUE NOV 13, 1990

ALARMS  
===== TANK 4 DIESEL  
WORST CASE  
\* OVERFLOW \*  
9965.5 GL NET CORRECTED PRODUCT VOLUME.  
9989.6 GL NET CORRECTED TANK VOLUME.  
9974.3 GL GROSSED MEASURED TANK VOLUME.  
25.7 GL VOLUME LEFT IN TANK.  
94.73 IN PRODUCT LEVEL.  
57.1 F AVERAGE FUEL TEMPERATURE.  
23.5 GL GROSS WATER VOLUME.  
1.2 IN WATER LEVEL.  
HIGH WATER  
START 10:22 AM TUE NOV 13, 1990  
END 11:14 AM TUE NOV 13, 1990  
WORST CASE  
\* HIGH WATER \*  
6254.2 GL NET CORRECTED PRODUCT VOLUME.  
6284.0 GL NET CORRECTED TANK VOLUME.  
6275.1 GL GROSS MEASURED TANK VOLUME.  
25.7 GL VOLUME LEFT IN TANK.  
57.86 IN PRODUCT LEVEL.  
57.3 F AVERAGE FUEL TEMPERATURE.  
29.8 GL GROSS WATER VOLUME.  
1.4 IN WATER LEVEL.  
\* LEAK INDICATED \*  
START 1:00 AM TUE NOV 13, 1990  
END 2:00 AM TUE NOV 13, 1990  
1.00 GAL PER HOUR AVERAGE LEAK RATE  
===== TANK 5  
MISSED MEAS  
START POWER UP  
END IN PROGRESS  
MISSED 528 MEASUREMENTS  
===== SYSTEM  
POWER FAILURE  
POWER FAILURE  
START 9:22 AM THU NOV 1, 1990  
END 11:14 AM THU NOV 1, 1990  
PRINTER FAILURE  
PAPER OUT  
START 8:57 AM TUE NOV 13, 1990  
END 9:01 AM TUE NOV 13, 1990

### Alarms Report